

Product datasheet for RC201798

Proteasome beta 1 (PSMB1) (NM_002793) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Proteasome beta 1 (PSMB1) (NM_002793) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Proteasome beta 1
Synonyms:	HC5; PMSB1; PSC5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201798 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGTTGTCCTCTACAGCCATGTATTCGGCTGCTGGCAGAGACTTGGGGATGGAACCGCACAGAGCCGCGG
GCCCTTTCAGCTGCGATTTTCGCCCTACGTTTTCAACGGAGGTACTATACTGGCAATTGCTGGAGAAGA
TTTTGCAATTGTTGCTTCTGATACTCGATTGAGTGAAGGGTTTTCAATTCATACGCGGGATAGCCCCAAA
TGTTACAAATTAACAGACAAAACAGTCATTGGATGCAGCGTTTTTCATGGAGACTGTCTTACGCTGACAA
AGATTATTGAAGCAAGACTAAAGATGTATAAGCATTCCAATAAAGGCCATGACTACGGGGCAATTGC
TGCAATGCTGTCTACAATCCTGTATTCAAGGCGCTTCTTCCATACTATGTTTACAACATCATCGGTGGA
CTTGATGAAGAAGGAAAGGGGGCTGTATACAGCTTTGATCCAGTAGGGTCTTACCAGAGAGACTCCTTCA
AGGCTGGAGGCTCAGCAAGTGCCATGCTACAGCCCTGCTTGACAACCAGGTTGGTTTTAAGAACATGCA
GAATGTGGAGCATGTTCCGCTGCTTGGACAGAGCCATGCGGCTGGTGAAGATGTCTTCAATTTCTGCG
GCTGAGAGAGATGTGTACACTGGGGACGCACTCCGGATCTGCATAGTGACCAAAGAGGGCATCAGGGAGG
AACTGTTTCCTTAAGGAAGGAC

ACGCGTACGCGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC201798 protein sequence
Red=Cloning site Green=Tags(s)

MLSSTAMYSAAGRDLGMEPHRAAGPLQLRFSPYVFNGGTILAIAGEDFAIVASDTRLSEGFSIHTRDSPK
 CYKLTDKTVIGCSGFHGDCLTLTKIIEARLKMVKHSNNKAMTTGAIAMLSTILYSRRFFPYVYVNIIGG
 LDEEGKAVYVSFDPVGSYQRDSFKAGGSASAMLQPLLDNQVGFKNMQNVEHVPLSLDRAMRLVKDVFISA
 AERDVYTGDALRICIVTKEGIREETVSLRKD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6376_c04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002793

ORF Size: 723 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_002793.4](#)

RefSeq Size: 938 bp

RefSeq ORF: 726 bp

Locus ID: 5689

UniProt ID: [P20618](#)

Cytogenetics: 6q27

Domains: proteasome

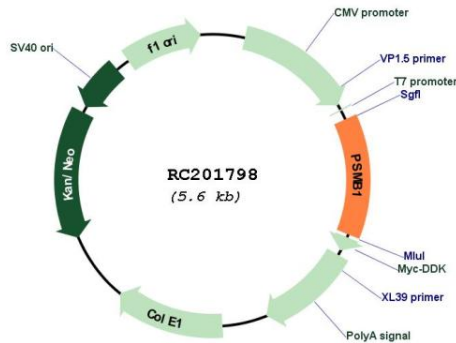
Protein Families: Protease

Protein Pathways: Proteasome

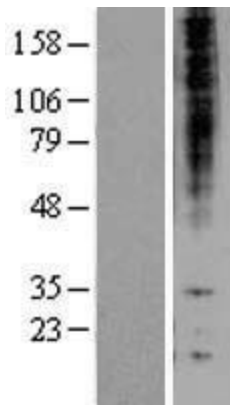
MW: 26.5 kDa

Gene Summary: The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. The core structure is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. This gene encodes a member of the proteasome B-type family, also known as the T1B family, that is a 20S core beta subunit. This gene is tightly linked to the TBP (TATA-binding protein) gene in human and in mouse, and is transcribed in the opposite orientation in both species. [provided by RefSeq, Jul 2008]

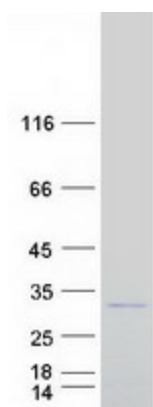
Product images:



Circular map for RC201798



Western blot validation of overexpression lysate (Cat# [LY419103]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201798 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSMB1 protein (Cat# [TP301798]). The protein was produced from HEK293T cells transfected with PSMB1 cDNA clone (Cat# RC201798) using MegaTran 2.0 (Cat# [TT210002]).